

AMENDMENTS TO THE DRAWINGS

Applicant submits herewith four drawing sheets marked "Replacement Sheet," which incorporate amendments made to FIGS. 2, 3A, 3B, and 12. Applicant also submits four drawing sheets marked "Annotated Sheet," with amendments made to the drawings indicated in red thereon. In accordance with 37 C.F.R. § 121(d), amendments to the drawing are explained in the Remarks section of this paper.

REMARKS

Before entry of this Amendment and Response, the status of the application according to the pending Office action is as follows:

- The drawings are objected to as failing to comply with 37 C.F.R. 1.83(a) because they do not show every feature of the invention specified in the claims.
- Claims 11-23 and 25 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.
- Claims 11, 13-23, and 25 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,736,826 to White et al. (hereinafter “White”).

With this Amendment and Response, Applicants hereby amend FIGS. 2, 3A, 3B, and 12 to provide numerical designations for elements depicted in the figures. Applicants hereby amend paragraph [0003] to correct a typographical error. Applicants also hereby amend paragraphs [0017], [0019]-[0021], and [0052] to more clearly describe elements depicted in the drawings and disclosed in the specification. No new matter is added thereby. Support for the amendments can be found in the specification and figures as filed.

Applicants also hereby cancel claim 12 and amend claims 11, 20, 21, 23, and 25. No new matter is added thereby. Support for the amendments can be found in the specification and figures as filed, at least at paragraphs [0017], [0019]-[0024], [0046], [0047], [0050], and [0052], and at FIGS. 2, 3A, 3B, 4, 5, and 12.

1. The drawings are objected to as failing to comply with 37 C.F.R. 1.83(a) because they do not show every feature of the invention specified in the claims. Applicants respectfully submit

that all features are shown in the drawings as filed. Nonetheless, Applicants amend the drawings to more clearly identify the claimed elements. Applicants also hereby amend the specification to more clearly describe the elements shown in the drawings and disclosed in the specification. Moreover, Applicants hereby amend claims 11¹, 20, and 25 to recite language consistent with that used in the specification. Specifically, Applicants amend claim 11 to recite, *inter alia*, “a substantially zero tension cable velocity based at least in part on platform velocity and on a position of the outlet with respect to a point around which the mobile platform turns.” Claim 20 has been amended to recite, *inter alia*, “a cable comprising a stowed portion and an end portion.” Claim 25 has been amended to recite, *inter alia*, “a substantially zero tension cable velocity based at least in part on platform velocity and on a position of a cable outlet from the mobile platform with respect to a point around which the mobile platform turns.” Accordingly, Applicants respectfully submit that the objection to the drawings has been overcome.

2. Claims 11-23 and 25 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse the rejection, as applied to the claims, as originally filed. Nonetheless, Applicants hereby amend the claims.

Specifically, Applicants hereby amend claims 11 and 25 to delete the reference to “an effective cable velocity” and a “platform configuration,” thus overcoming the rejection with regard to those terms. Claim 12 has been cancelled, thus rendering the rejection moot with regard to that claim. Claim 23 has been amended to recite “a position along a length of cable

¹ The Office action indicates that claim 1 contains features not shown in the claims. Applicants assume that the identified claim is actually claim 11, as claim 1 was withdrawn from consideration in response to a Restriction Requirement. Should Applicants belief be in error, Applicants respectfully request clarification of this issue by the Examiner.

comprising a known length.” In response to the Examiner’s question on p. 4 of the Office action, Applicants respectfully note that the Applicants are not reciting “determining the position of a cable length” in claim 23. Instead, Applicants are reciting “determining . . . a position along a length of cable.” Regardless, Applicants have amended claim 23 to clarify the subject matter which Applicants regard as the invention. Moreover, Applicants direct the Examiner’s attention to paragraphs [0046], [0047], and [0050] for support for the claim (in both its original and amended form).

3. Claims 11, 13-23, and 25 are rejected under 35 U.S.C. §102(b) as being anticipated by White. Applicants respectfully traverse the rejection, as applied to the claims, as amended.

White appears to disclose a robot that, while moving, lays down cable with zero tension. White, col. 7, ll. 53-58. As noted in the patent, “[t]he drive wheel encoders 45 then indicate information that determines the dispensing and retraction of the cable in a controlled manner so that the cable will not have any tension on it between the robot and its station.” *Id.* at col. 9, ll. 23-26. Notably, Applicants addressed limitations with prior art cable payout systems like those of White that utilize robot drive wheel rotation as the primary control parameter. See the instant application as filed, specifically at paragraph [0051].

In contrast, Applicants claim, in amended claim 11, a mobile platform comprising, *inter alia*, “a system controller for controlling the cable handling system, the controller determining platform velocity according to the drive system sensor, and determining a substantially zero tension cable velocity based at least in part on platform velocity and on a position of the outlet with respect to a point around which the mobile platform turns.” Claims 23 and 25 include similar limitations. Applicants respectfully submit that White fails to disclose, at a minimum, a

system controller that “determin[es] a substantially zero tension cable velocity based at least in part on platform velocity and on a position of the outlet with respect to a point around which the mobile platform turns.” Instead, White appears to dispense and retract zero tension cable based solely on input from the drive wheel encoders, not in part on platform velocity. Applicants’ understanding of the problems associated with dispensing cable based on drive wheel encoders are noted in paragraph [0051] of the application, as filed:

Robots employing zero cable tension payout systems can have difficulty paying out cable when moving in directions that deviate from a straight line. For example, when monitoring robot drive wheel rotations as the primary control parameter, an improper amount of cable can be dispensed. A particular problem occurred when prior art robot attempted to execute a zero radius, or neutral, turn (i.e., a rotational turn where the robot does not move forward or backward while turning). The handling system of the present invention compensates for the possible problems associated with any turns (including a zero radius turn), by storing in its memory the distance between the axial center of the robot (i.e., the point around which the robot would rotate) and the outlet of the cable handling system.

Moreover, the system described in White does not appear to factor in its determination of cable to be dispensed or retracted, a position of the outlet with respect to a point around which the mobile platform turns. Again, the determination appears to be based solely on information from the wheel encoders, which does not ensure zero tension dispensing and retraction.

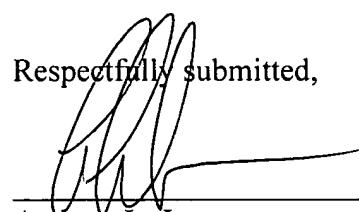
Accordingly, Applicants respectfully submit that amended independent claims 11, 23, and 25 are patentable over White. Because claims 12-22 depend, either directly or indirectly, from amended independent claim 11, and include all of the limitations thereof, Applicants respectfully submit that these claims are patentable as well. Reconsideration and withdrawal of the rejection of claims 11-23 and 25 under 35 U.S.C. § 102(b) based on White are respectfully requested.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration, withdrawal of all grounds of rejection and objection, and allowance of claims 11, 13-23, and 25 in due course. The Examiner is invited to contact Applicants' undersigned representative by telephone at the number listed below to discuss any outstanding issues.

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Respectfully submitted,



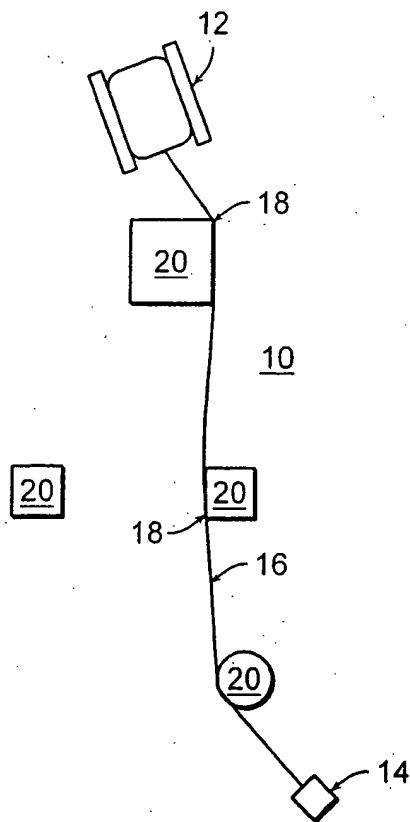
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LIBA/1751030.1



Title: Communications Spooler for a Mobile Robot
Inventors: Pack et al.
Atty Docket No. IRO-009
U.S.S.N. 10/811,316
Atty: CWStamos/ALJagenow
Annotated Sheet

1/13



PRIOR ART

FIG. 1

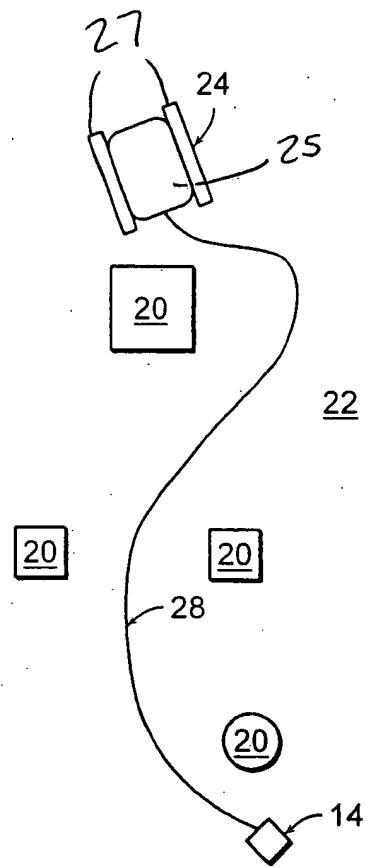
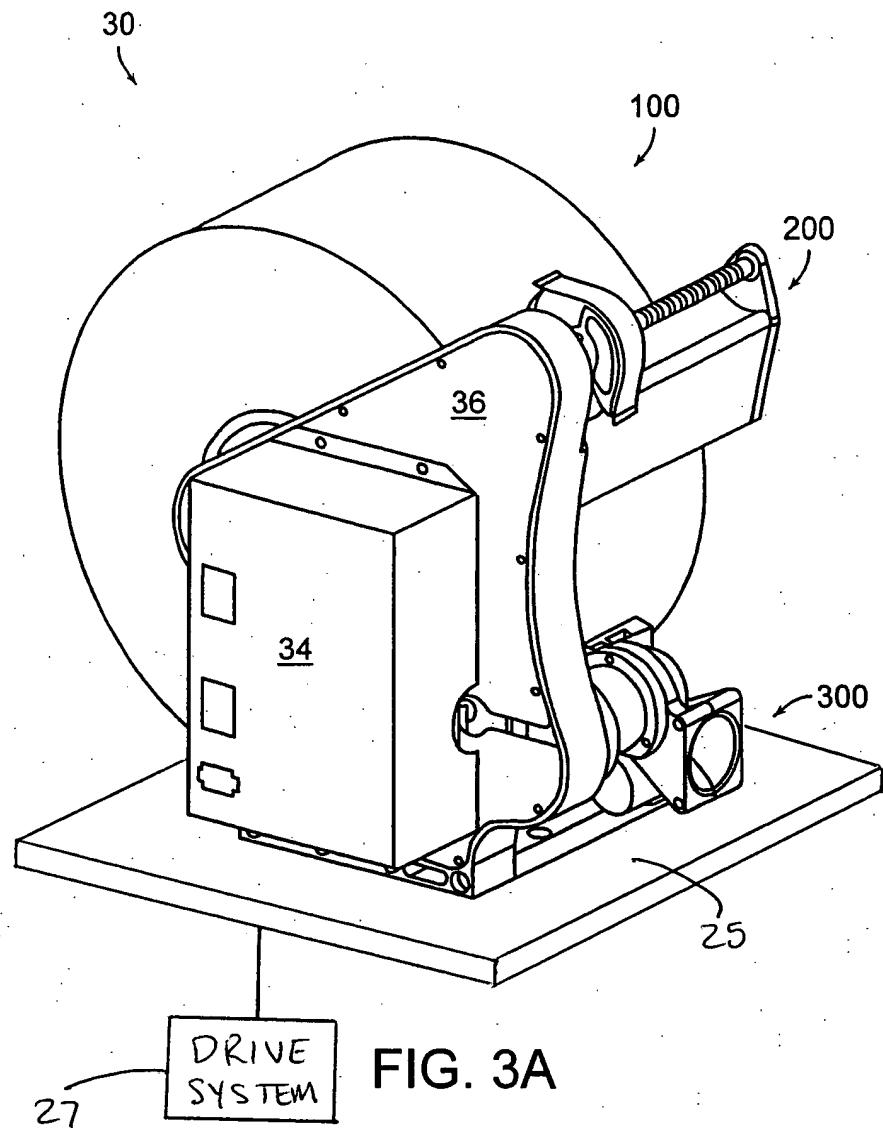


FIG. 2



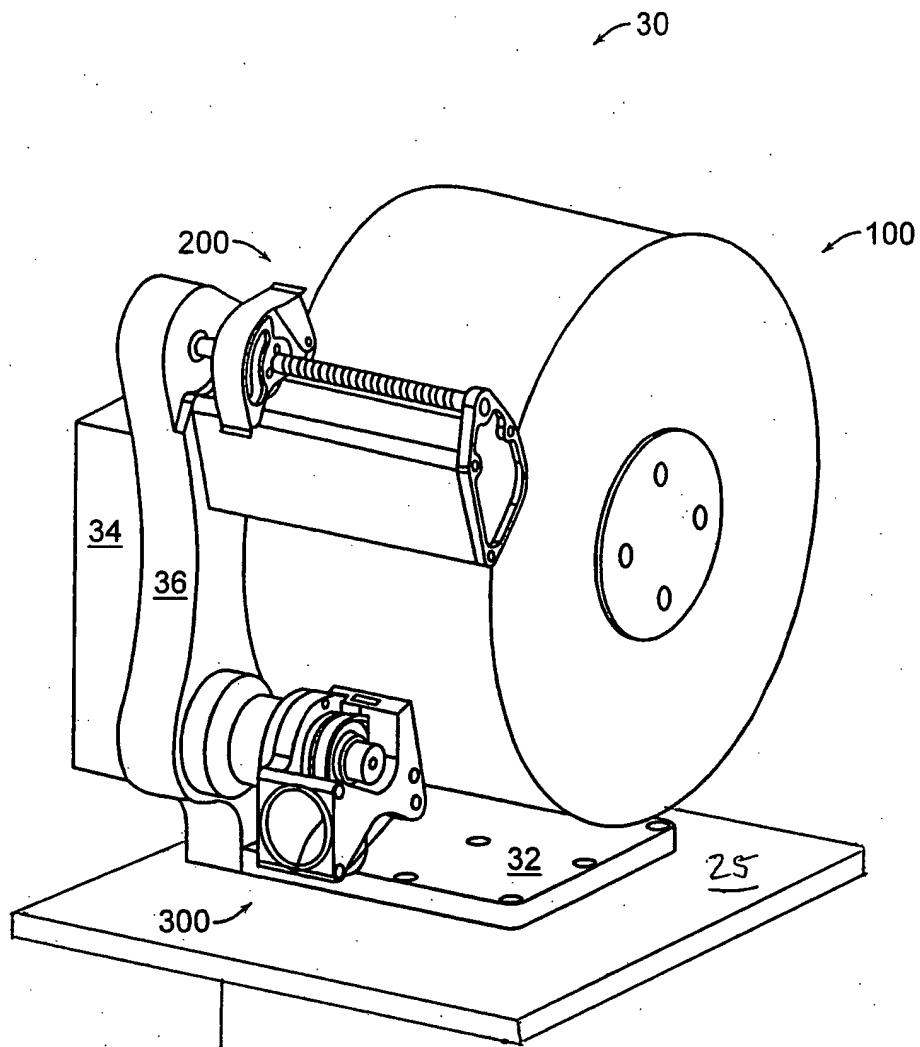


FIG. 3B

DRIVE SYSTEM

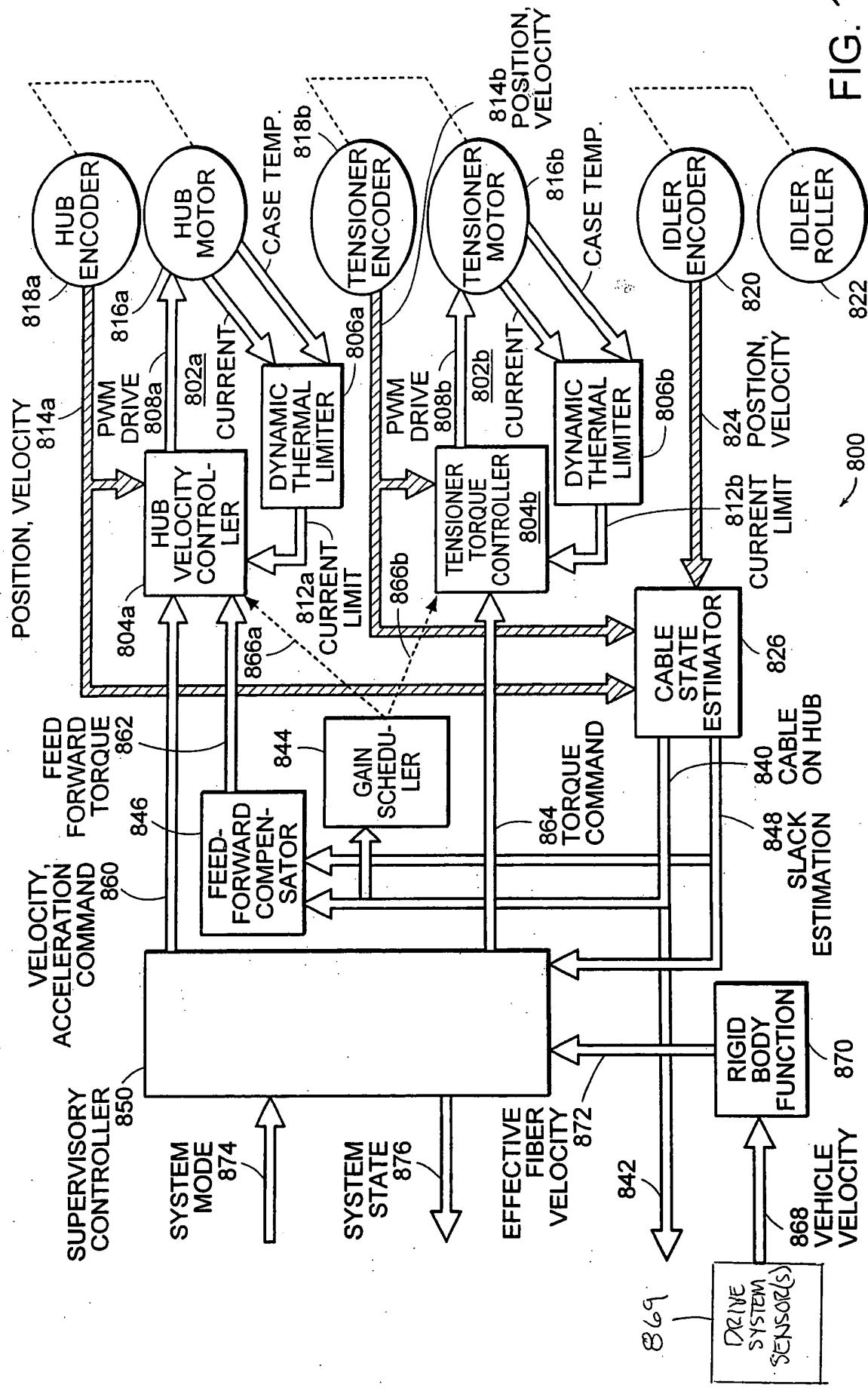


FIG. 12